# RESPONSE OPERATING GUIDELINES



# FATALITY MANAGEMENT FOR CATASTROPHIC INCIDENTS 2011

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# **RECORD OF CHANGES**

# **RESPONSE OPERATING GUIDELINES**

# **FATALITY MANAGEMENT FOR CATASTROPHIC INCIDENTS**

Change #	Date Entered	Location/Description of Change	Page #	Initials
1	8-22-2011	Changed MACC to SMOC	Throughout document	mhe
	8-22-2011	Updated email addresses and web links	Throughout document	mhe
	8-22-2011	Updated Attachment 3: Medical Examiner Offices (map and text)	17	mhe
	8-22-2011	Updated Tab B to Attachment 4: List of Medical Examiners	26	mhe
	8-22-2011	Removed Attachment 5: Description of Mass Fatality Toolkit		mhe

Submit comments/changes to this document via email to <a href="mailto:rrugroup@dshs.state.tx.us">rrugroup@dshs.state.tx.us</a>.

Please include the title of this document in the email subject line.

#### I. AUTHORITY

Appendix 4 to Annex H, State of Texas Emergency Management Plan, 12/14/2009

#### II. PURPOSE AND SCOPE

As the State's primary agency for Emergency Support Function (ESF) 8, the Department of State Health Services (DSHS) is assigned to coordinate state fatality management response operations when a local jurisdiction has requested the assistance of the State.

The purpose of the "Fatality Management for Catastrophic Incidents" Response Operating Guideline (ROG) is to explain how DSHS will coordinate fatality management response operations internally, with partners, and with supporting state agencies.

#### III. ACRONYMS AND DEFINITIONS

#### A. ACRONYMS

CDC	Centers for Disease Control and Prevention
ESF	Emergency Support Function
FAC	Family Assistance Center
HSR	Health Service Region
JP	Justice of the Peace
LHD	Local Health Department
NTSB	National Transportation Safety Board
PPF	Personal Protective Equipment

RAC-TSA Regional Advisory Council-Trauma Service Area

SMOC State Medical Operations Center

# **B.** DEFINITIONS

Autopsy: A post mortem examination of a body to determine the cause and manner of death or the nature of any pathological changes which may have contributed to death.

**Biometric:** The measurement of physical characteristics, such as fingerprints, DNA, or retinal patterns, for use in verifying the identity of individuals.

Cause of Death: A formal, certified opinion by an attending physician or the medico-legal authority of the internal medical condition and/or external incident or chain of incidents that resulted in death.

Center for Disease Control & Prevention (CDC): CDC works with partners throughout the nation and the world to monitor health, detect and investigate health problems, conduct research to enhance prevention, develop and advocate sound public health policies. implement prevention strategies, promote healthy behaviors, foster safe and healthful environments, and provide leadership and training.

Dashboard: The dashboard is a document that contains status updates on the critical data elements that support the mission of DSHS. The critical data elements that may be included are defined by the ESF 8 areas of responsibility. When the State Medical Operations Center (SMOC) is activated, the Dashboard will be developed by the Dashboard Staff in the Planning & Intelligence (P&I) Section's Documentation Unit. The SMOC Director, in coordination with DSHS Executive Leadership will determine the need for a dashboard, the data elements to be included as well as the frequency it will be updated and the distribution list. Templates for natural disasters, CBRNE (chemical-biological-radiological-nuclear-explosive), Pandemic Flu and infectious disease/food-borne illness outbreak have been developed as guides.

**Death Care Resources**: Licensed funeral homes, commercial embalming facilities, crematories, cemeteries and personnel including but not limited to funeral directors who are licensed or trained in the respectful handling of human remains.

**Death Certificate:** The permanent legal record of the fact, cause, and manner of death, and when applicable, how the injury resulting in death occurred. In Texas, the Department of State Health Services (DSHS) prescribes the form and contents of death certificates.

**Death Registration:** The process of reporting facts of the death to the local registrar for use in producing a death certificate. In Texas, the person in charge of interment or in charge of removal of a body from a registration district for disposition of human remains is responsible for electronically filing required death certificate information.

Family Assistance Center (FAC): A group of specially trained individuals who interview family members of the deceased in a sensitive and compassionate manner to enable positive identifications of remains, to provide culturally and spiritually appropriate support services, and to assist in the return of decedent remains for final disposition per the wishes of the deceased as represented by the next of kin.

**Final Disposition of Human Remains:** The concluding arrangement for the remains of the decedent, a decision of the next of kin in an emergency. Options include burial, entombment or cremation.

**Health Authority:** A qualified physician appointed under Chapter 121 of the Texas Health and Safety Code to administer state and local laws which protect the public health within the appointing jurisdiction. Duties include investigating and reporting the presence of contagious, infectious and dangerous epidemics to DSHS, and aiding DSHS in enforcing both disease control measures and death registration.

**Health Service Region (HSR):** provides local public health services for counties that do not have a LHD.

**Inquest:** An investigation into the cause and circumstances of death, and the determination, made with or without a formal court hearing, as to whether the death was caused by an unlawful act or omission. Whenever human remains are found and the cause or manner of death is unknown, an inquest is required.

**Interim Storage of Human Remains:** The temporary storage of human remains until final disposition can be accomplished. Methods include cold storage using a variety of means, or sites for temporary in-the-ground interment.

**Justice of the Peace (JP):** An elected county official whose duties include serving as the medico-legal authority in counties that do not maintain an Office of the Medical Examiner.

**Local Health Department (LHD):** responsible for the oversight and care of matters relating to the health and safety of the public.

**Local Registrar:** Entity appointed to register births and deaths that occur in a municipality or county.

**Manner of Death:** A general description of how an individual died. In Texas, five (5) possible manners of death are recognized: natural, accident, homicide, suicide, and undetermined.

**Mass Human Fatalities:** An incident, disaster, or public health emergency where more human deaths have occurred than can be managed with local or regional resources.

**Medical Examiner (ME):** A qualified physician appointed in counties with a census of 1 million or more to identify the dead and determine cause and manner of death.

<u>Medico-legal</u>: Of or pertaining to law as affected by medical facts.

**Medico-legal Authority:** The local authority assigned to conduct medico-legal death investigations. This responsibility is assigned to the Office of the Medical Examiner or Justice of the Peace in jurisdictions without an Office of the Medical Examiner.

**Medico-legal Death Investigation:** The combined task of collecting and interpreting information about the circumstances and cause of death conducted under the exclusive purview of the designated medico-legal authority.

**Morgue:** A place where human remains are kept, especially the bodies of victims of violence or accidents, pending identification or determination of cause and manner of death, or final disposition.

**National Transportation Safety Board (NTSB):** An independent federal agency charged by Congress to investigate transportation accidents, issue safety recommendations aimed at preventing future accidents and determine the probable cause of these accidents.

**Pandemic:** An epidemic that occurs over a large geographic area and affects a large portion of the population.

**Personal Protective Equipment (PPE):** Equipment that is most commonly used to protect the head, torso, arms, hands, and feet from hazards. It is used to reduce employee exposure to hazards when engineering and administrative controls are not feasible or effective in reducing these exposures to acceptable levels.

**Pronouncement of Death:** Legally, an announced opinion by a qualified medical provider that there is irreversible cessation of the person's spontaneous respiratory and circulatory functions.

**Public Health Emergency:** An occurrence or imminent threat of an illness or health condition caused by bioterrorism, epidemic or pandemic disease, or novel and highly fatal infectious agent or biological toxin, that poses a substantial risk of a significant number of human fatalities or incidents of permanent or long-term disability.

**Public Health Surveillance:** Public health surveillance is the ongoing, systematic collection, analysis, interpretation, and dissemination of data regarding a health-related event for use in public health action to reduce morbidity and mortality and to improve health.

**Regional Advisory Council-Trauma Service Area (RAC-TSA):** The state is divided into 22 Trauma Service Areas, each of which has a Regional Advisory Council providing oversight.

**Unnatural or unexplained deaths:** Include homicides, suicides, unintentional injuries, drug-related deaths, and other deaths that are sudden or unexpected, as opposed to natural deaths caused by known disease or old age.

#### IV. SITUATION AND ASSUMPTIONS

#### A. SITUATION

- 1. A mass fatality incident has occurred in the state of Texas that has overwhelmed local and regional capacity for response and state assistance has been requested.
- 2. Initially, mass human fatalities should be considered unnatural or unexplained deaths requiring medico-legal investigation unless the medico-legal authority decides otherwise.
- Mass human fatality incidents involving infectious disease outbreaks fall under the jurisdiction of DSHS and its public health partners to investigate. The result of this investigation will be the case definition for use in certification of death by medico-legal authorities.
- Texas law requires that every human death be officially pronounced, certified, and registered by appropriately licensed professionals prior to the final disposition of remains.
- 5. The certification of death involves determining the cause and manner of death. Licensed treating or primary-care physicians are authorized to certify natural deaths.
- 6. The data and biometric identifiers necessary for accomplishing the pronouncement, certification, and registration of death should be methodically collected and appropriately stored.
- 7. Deaths of unidentified individuals, children, and unnatural deaths fall under the jurisdiction of the local medico-legal authority. Such deaths must be reported to the local medico-legal authority as soon as possible and the remains should not be moved or removed from the scene, outside of rescue or resuscitative efforts, until the medico-legal authority responds to the scene.
- 8. The scope of the investigation is determined by the medico-legal authority in the jurisdiction where the death occurred.

- 9. Texas does not have a State Medical Examiner System. Standards, protocols and access to highly specialized technical services or laboratories vary from county to county. There are 14 County Medical Examiner Offices covering 16 counties. The remaining 238 counties rely on elected Justice of the Peace (JPs) for medico-legal death investigation (see Attachment 3). Many counties without a Medical Examiner Office contract with the closest Medical Examiner's office and/or with private forensic pathologists to provide determination of cause and manner of death.
- 10. While death registration requires the determination of cause and manner of death, it is possible to secure an interim death certificate that states cause of death is pending. Interim death certificates allow progress towards the final disposition of human remains.
- 11. Persons handling human remains may be at risk of exposure to possible pathogens. Universal precautions must be used along with training for handling human remains and personal protective equipment (PPE).
- 12. A mass fatality incident may be the result of exposure to chemical, biological, radiological, nuclear or explosive (CBRNE) agents. Specialized assets to assist with decontamination of victims to exposure to CBRNE agents may be required.
- 13. A disaster event that has casualties will cause significant media attention. Therefore, scene control is imperative. The Joint Information System (JIS) should be prepared to respond to public and media inquiries regarding salient facts about the mass fatality incident.
- 14. Cultural, religious and spiritual considerations will affect actions of response agencies and organizations.
- 15. DSHS will coordinate Family Assistance Center operations, as appropriate.
- 16. A standard information management system does not exist for the tracking the movement and storage human remains. Procedures for this should be developed at the local, regional and state level.

#### **B.** Assumptions

- 1. It may take a considerable length of time to recover, identify and determine the cause and manner of death after a mass human fatality incident.
- 2. A severe disaster incident may take longer to resolve and may require in-the-ground interment or other temporary storage of human remains.
- 3. Medico-legal authorities and death care providers will experience a surge on top of usual caseload from the incident, disaster or public health emergency, including a possible increase in intentional and unintentional deaths precipitated by the mass fatality incident.
- 4. Due to the prolonged time frame and the geographic area affected by a severe disaster, federal resources may not be available to provide assistance.
- 5. Medico-legal authorities should be included in communications interoperability plans and procedures at local and state levels.
- 6. The identification of the deceased during and immediately following the event is critical.
- 7. Disasters resulting in mass human fatalities have the potential to quickly overwhelm resources of a jurisdiction and it may be several days before a coordinated response can begin.
- 8. A mass fatality event could be the result of terrorist activity and would require partnership with the FBI.
- 9. Person's handling corpses may be under the chain of custody requirement.

#### V. CONCEPT OF OPERATIONS

# A. GENERAL

- 1. All mass human fatality response operations will follow the NIMS and the National Response Framework (NRF) structure.
- 2. When a catastrophic incident with the potential for mass fatalities occurs, DSHS, through the SMOC, will maintain contact with the impacted jurisdiction, monitor the incident, facilitate the processing of local requests for assistance, and act as a liaison to state, other state, federal and private organizations. In certain disasters or public health emergencies, DSHS may determine the need to preposition State fatality surge assets.
- 3. Local requests for surge equipment, supplies, and personnel may be made according to established protocols for emergency assistance requests as outlined in the State of Texas Emergency Management Basic Plan. This should be done in coordination with the Local Health Department (LHD) and/or Health Service Region (HSR) office (in counties without local health departments) and the local medico-legal authority. State fatality surge resources will be placed under the responsibility of the local medico-legal authority.

#### **B.** RESPONSIBILITIES

- 1. THE DSHS STATE MEDICAL OPERATIONS CENTER (SMOC) WILL:
  - a. Communicate with the local medico-legal authority and local emergency management officials.
  - b. Determine need for activating, the state strike team(s) and other resources to determine whether local needs can be addressed through regional and state resources.
  - c. Coordinate the state decision-making process regarding health and medical resource allocations.
  - d. Determine need for requesting resources from other states through the use of Emergency Management Assistance Compacts (EMACS) or the federal government Disaster Mortuary Operational Response Teams (DMORT).
  - e. Take a leadership role in coordinating resources from other states or the federal government.
  - f. Activate the Fatality Management Group to coordinate the statewide data collection, analysis, and reporting of disaster-related fatalities.
  - g. Disseminate mortality surveillance reports on the dashboard.
  - h. Upon situational awareness of an impending or actual mass fatality incident, initiate disaster-related mortality surveillance.
- 2. INFECTIOUS DISEASE CONTROL UNIT (IDCU) WILL:
  - a. Coordinate with the Centers for Disease Control and Prevention (CDC) to develop and adopt an incident-specific standard case definition for infectious disease fatalities in a public health emergency or disaster.
  - b. Determine if samples from decedents are indicated to understand the epidemiology of a disease, and if so, will outreach to medical examiner(s) as indicated.
  - c. Follow established protocol for the collection of samples.

- d. Provide incident-specific guidance on appropriate preventive protections for responders engaged in mass fatality response operations.
- e. Conduct infectious disease mortality surveillance in coordination with LHD and HSR epidemiologists.
- f. Develop an incident-specific infectious disease mortality surveillance procedure and tool.

# 3. CENTER FOR CONSUMER AND EXTERNAL AFFAIRS (CCEA) WILL:

- a. Communicate mass fatality incident related issues with State and federal leadership as well as external partners using their established procedures.
- b. As needed, distribute information to the public using established mechanisms.

#### 4. FATALITY MANAGEMENT GROUP WILL:

- a. Coordinate the statewide data collection, analysis and reporting of mortality surveillance, for a limited time period with the HSRs, local health departments, local medico-legal authority, vital statistics, and other reporting sources. For more details on this team, see Attachment 4: Texas Mortality Surveillance guidelines.
- b. Generally include up to three individuals skilled in epidemiology, data collection, analysis and report writing. Positions that may serve on the team include but are not limited to: Epidemiologists, Research Specialists, and Public Health Technicians. The team is scalable and flexible depending on the nature, size and scope of the disaster.

#### 5. DISASTER BEHAVIORAL HEALTH ASSISTANCE TEAM WILL:

- a. Coordinate the provision of behavioral support services to survivors, first responders, disaster workers and communities impacted by a mass fatality incident.
- b. Coordinate Family Assistance Center behavioral health operations to include providing psychological, emotional, spiritual support and referral services.

#### C. OPERATIONAL AREAS

#### 1. HUMAN REMAINS RECOVERY

#### a. GENERAL

- 1) Upon receipt of a request for assistance, the SMOC will contact the Texas State Disaster Mortality Strike Team (see Attachment 1).
- 2) The Strike Team(s) will be directed to contact the local emergency management authority to offer assistance in evaluating and characterizing a mass fatality incident to determine the level and type of response resources needed, and to determine staging locations for state acquired response resources.

#### b. RECOVERY OF DECEDENTS FROM A MASS FATALITY INCIDENT

Disaster Mortality Strike Team members will operate under the direction of the local medico-legal authority (i.e. medical examiner or justice of the peace) using the protocol of the requesting jurisdiction in coordination with local emergency management.

#### c. Recovery of Disinterred Caskets

Disaster Mortality Strike Team members will operate under the direction of the emergency management authority in the requesting jurisdiction. Fulfillment of requests for state assistance for equipment needed in the recovery of caskets will be facilitated by staff at the DSHS desk at the SOC. Team member assistance in the determination of identity of casketed remains will be limited to what is accomplished without the benefit of forensics.

#### 2. MORGUE SUPPORT

#### a. Morgue Surge Personnel

The local medico-legal authority will determine whether personnel support needs can be fulfilled by the TFDA Disaster Mortality Strike Team. If not, this will be communicated to the SMOC to determine the means for fulfillment.

#### b. Morgue Surge Supplies and Equipment

Fulfillment of local requests for mortality surge equipment and supplies will be made from the state mortality surge cache (See Attachment 2). Once supplies are exhausted, the SMOC will determine whether to purchase additional supplies or request assistance through EMAC or the federal government.

#### c. Temporary Storage

- The state has limited resources for temporary storage (see Attachment 2). As needed, the SMOC will request the use of FEMA trailers through established mechanisms. If secured, these resources will be placed under the control of the local medico-legal authority who will need to work through local emergency management authorities to secure electric power.
- 2) Depending upon the size of the mass fatality incident, temporary interment in a locally-determined non-sectarian location(s) may be the only viable storage solution. After the emergency has passed, local communities can work with families to facilitate final disposition of remains.
- 3) In the event that no local site is available, the SMOC will work with the Texas Funeral Services Commission and other agencies to identify a suitable location.

#### 3. FAMILY ASSISTANCE CENTERS

NOTE: For more information about Family Assistance Centers, see the *Mass Fatality Management Planning Toolkit*, Tab B (Click <u>here</u>)

- a. A Family Assistance Center (FAC) needs to be planned for and established as soon as possible after a mass fatality incident occurs. This enables one location to coordinate information dissemination to families of possible victims coming to the scene looking for information on identifying family members that may have been involved in the incident.
- b. The length of time the FAC will be needed depends on the length of time necessary to recover and identify the victims of the incident, support the families of the victims and support the response personnel working the incident.

c. Family Assistance Center operations include sharing information with, providing physical, psychological, emotional and spiritual support services for, and obtaining before-death information about the deceased from family members to aid in identification efforts.

#### 4. MORTALITY SURVEILLANCE (SEE ATTACHMENT 4 FOR MORE DETAILS)

The goals of mortality surveillance for disasters are to:

- a. Identify the number of deaths-related to the disaster and provide basic mortality information about the deceased for public health and emergency officials in affected jurisdictions.
- b. Identify high risk groups that could benefit from immediate public health interventions.
- c. Evaluate and assess the direct and indirect impact of the disaster and its human toll in affected communities.
- d. Provide information on disaster-related mortality for public health and emergency officials to assist in coordinating response actions, and for use in future planning and mitigation efforts.

#### 5. DEATH REPORTING

- a. Enhanced mortality surveillance during a mass fatality incident is not designed nor does it replace the normal death registration process (e.g., death certificate completion and reporting to local and State vital statistics offices).
- b. DSHS Vital Statistics will ensure that those who have responsibility for filing certificates of death either manually or electronically will do so in accordance with established statutes and rules.

#### **VI. MAINTENANCE AND UPDATES**

The Response and Recovery Unit Operations Group is responsible for maintaining and updating the *Fatality Management for Catastrophic Incidents* Response Operating Guideline (ROG).

This ROG is a living document. It will be reviewed, updated, and approved on an annual basis or more frequently in response to department policy, procedure changes, an exercise and/or an actual event.

Revisions/changes made to the ROG after the Effective Date (March 1) are recorded in the Record of Changes form found on page 3. The following is the review and update schedule that will be followed: (1) Review & Comment – December; (2) Post for Review – January; and (3) Effective Date – March.

# **VII. ATTACHMENTS**

- 1. Mortality Surge Resources: Personnel
- 2. Mortality Surge Resources: Supplies & Equipment
- 3. Medical Examiners Offices in Texas
- 4. Disaster Mortality Surveillance Guidelines

#### ATTACHMENT 1: MORTALITY SURGE RESOURCES - PERSONNEL

#### **Texas Funeral Director Association Disaster Mortality Strike Team**

<u>Purpose</u>: Assist local authorities in evaluating and characterizing a mass fatality incident, provide situational awareness to the Texas Department of State Health Services, and assist local jurisdictions with initial stages of response.

#### Objectives:

- 1. Evaluate mass fatality incident characteristics to determine the appropriate response resources required.
- 2. Assist in determining what local response resources are available and size the gap of necessary resources.
- 3. If additional resources are needed, assist with submitting requests for state or federal assistance and advocating for necessary resources and multi-agency involvement.
- 4. Assist local jurisdictions with body recovery, transport and establishment of a holding morgue and the recovery and transport of disinterred caskets (when needed).

<u>Limitation</u>: This is intended to be an initial effort to support local jurisdictions. This strike team is not intended to replicate the scope and capacity of a federal disaster mortuary operations response team (DMORT).

<u>Timeframe</u>: On-scene within 12-24 hours post-incident; phase-out when local jurisdiction is able to manage independently and/or federal DMORT resources have arrived and an orderly transition has occurred.

# Mass Fatality Incident Characterization:

Mass fatality incident characterization assists local, state and federal entities to identify the appropriate resources, capabilities and processes needed to manage this (and potentially multiple) mass fatality incident(s).

#### Site Criteria:

- 1. Type of incident: natural versus criminal/terrorist versus accident.
- 2. Recovery complexity: shifting terrain? Fixed or distributive location? Building material present? Types of buildings in close proximity? Need for excavation? Water/tides present? Need for extensive gridding? Identify whether a sifting site is needed (will require anthropology consult). Burning/smoldering?
- 3. Contamination or infectious/transmissible disease present? Need for public health community constraints or special PPE for responders?
- 4. Environmental conditions factors: heat; cold; humidity; rain.
- 5. Incident characteristics: single occurrence versus reoccurring: one location versus multiple locations.

#### Decedent Criteria:

- 1. Number of decedents approximate or accurate number.
- 2. Condition of remains: complete remains? Fragmented/commingled? Decomposed?
- 3. Victim manifest: closed population (known number/names) versus open population with no available list.

- 4. If open population, who is collecting/managing missing persons data collection?
- 5. Characteristics/demographics of decedent group: children, adults, members of church group/business/tour group, etc.

#### Response Capabilities Criteria:

- 1. Local response capability: fully or partially operational? Decimated? Morgue operation capacity: medical examiner versus justice of the peace; forensic capabilities: pathologists, anthropologists, odontologists, investigators, fingerprint and DNA specialists, ante-mortem interviewers; Level of integration with both public health and emergency management.
- 2. Decedent transport capability: vehicles and manpower.
- 3. Personal Protective Equipment/supplies.
- 4. Data collection and reporting capability: ante-mortem (from families and friends) and postmortem (from scene and morgue); death reporting and certification.
- 5. Family Assistance Operations: single or multiple locations? Face to face versus virtual service needed? Cultural considerations: language, beliefs.

<u>Size of Strike Team</u>: Minimum of 4 individuals: Team Lead and 3 Team Members; maximum of 10 Teams (depending on number of locations). Two of the people are licensed and two are non-licensed.

#### Required Knowledge, Skills, and Abilities of Strike Team Members:

#### 1. KNOWLEDGE OF:

- Local, state and federal laws pertaining to mortality management;
- The basic concepts and standard operations of mass fatality management including the authorities of medical examiners and/or justice of the peace and the resource requirements for victim identification and determination of cause and manner of death;
- Federal mortality resources available to local communities during emergencies and disasters and how to request these resources;
- Death investigation protocol and procedure;

#### 2. SKILLS IN:

Tact and diplomacy;

#### 3. ABILITY TO:

- Understand medical/forensic information and terminology;
- Manipulate heavy objects;
- Operate a motor vehicle by day and by night;
- Write reports containing technical information; Ability to maintain quality, safety, and/or infection control standards;
- Work with distressing and/or unpleasant odors, procedures and circumstances;
- maintain emotional stability to cope with human suffering, emergencies and other stressors and to provide comfort to people during times of grief;
- Communicate technical information to non-technical personnel; Ability to investigate and analyze information and draw conclusions.

#### **AGENCIES/ORGANIZATIONS**

#### 1. STATE

a. Texas Funeral Service Commission (TFSC):

According to Tab 4 to Annex H (Mass Fatality Management), the Texas Funeral Services Commission (TFSC) is responsible for the following:

- 1) Assist local jurisdictions in resolving issues related to cemetery washout.
- 2) Assist local authorities in returning human remains to the country of origin as required.

#### **Contact Information for TFSC:**

Physical Address: 333 Guadalupe #2-110

Austin TX 78701

Phone: 512-936-2474 Fax: 512-479-5064

Toll Free: 1-888-667-4881

Chet Robbins, Executive Director Email: crob@tfsc.state.tx.us

#### 2. FEDERAL

a. Disaster Mortuary Operational Response Team (DMORT):

This is a Federal Level Response team designed to provide mortuary assistance in the case of a mass fatality incident or cemetery related incident. Resource is accessed via State Operations Center through the Action Request Form (ARF). The DMORT can provide (source: www.dmort.org):

- Mobile Morgue Operations
- Forensic examination
- DNA Acquisition
- Remains identification
- Search and recovery
- Scene documentation
- Medical/psychology support
- Embalming/casketing
- Family Assistance center

- Ante-mortem data collection
- Postmortem data collection
- Records data entry
- Database administration
- Personal effects processing
- Coordination of release of remains
- Provide a liaison to USPHS
- Provide communications equipment
- Safety Officers and Specialists

# b. Federal Emergency Management Agency (FEMA)

FEMA has 40 refrigerator trucks located in Fort Worth as well as a GSA contract. Resource is accessed via State Operations Center through the Action Request Form (ARF).

#### ATTACHMENT 2: MORTALITY SURGE RESOURCES - SUPPLIES AND EQUIPMENT

According to the contract between DSHS and the Texas Funeral Directors Association:

TFDA shall maintain inventory, storage and rotation of death care supplies and equipment. These resources are State resources set aside for use in a public health emergency or disaster to support the needs of local jurisdictions. They will be released solely at the direction of DSHS.

- 1. Supplies: TFDA shall maintain inventory of infection control supplies for use by persons at risk is death care settings as well as maintain mortuary services supplies. TFDA shall follow manufacturers recommended procedures for storage of the death care purchases.
  - a. Infection Control Supplies:
    - 120 cases of surgical masks
    - 100 cases of hand sanitizer (12-ounce bottle)
    - 120 cases of hand sanitizer (800 ml refill)
    - 120 cases of disposable or reusable full face shields latex free
    - 425 total cases of gloves latex free
      - X-Small: 60 cases
        Small: 65 cases
        Medium: 75 cases
        Large: 75 cases
        X-large: 65 cases
        XX-large: 65 cases

120 cases of N-95 masks

- b. Mortuary Services Supplies:
  - 50 cases of sealing duct tape (2" x 6- yards)
  - 2300 cases of embalming fluids
  - 15,000 body bags: leak-proof heavy duty with handles

#### 2. Equipment

TFDA shall maintain three (3) Refrigerated Morgue Storage Trailers in compliance with the code of Federal Regulations, title 45, Part 75.34 (45CFR74.34). Specifically, TFDA will:

- a. Maintain title and records on each item of equipment
- b. Continue and secure long-term storage for the equipment
- c. Maintain proper insurance or other means of asset replacement
- d. Add to each morgue trailer:
  - 1) A lift system for human remains at \$1600 per trailer
  - 2) A trickle charger at \$48 per trailer
- e. Provide annual maintenance on each trailer
- f. Provide monthly maintenance on each trailer that includes but is not limited to: going to the site, checking and starting generators, checking tire pressure, etc.

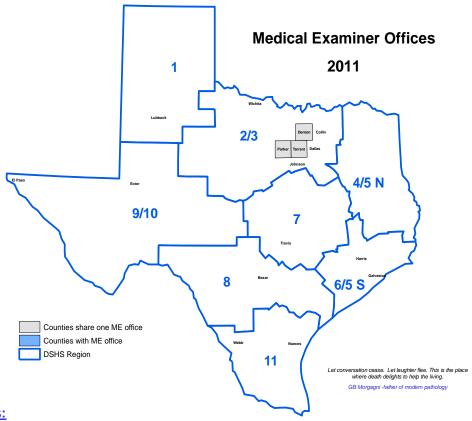
How to access resources: Contact the TFDA Disaster Mortality Strike Team.

David Patterson, Co-Chair Phone: 972-216-2700 Global Mortuary Affairs Cell: 214-597-3207

117 W Main St Email: Drpatterson63@gmail.com

Mesquite, TX 75149

#### **ATTACHMENT 3: TEXAS MEDICAL EXAMINERS OFFICES**



- Facts:
- Texas has no State Medical Examiner (ME)
- · Texas has a mixed medicolegal investigation system consisting of MEs and Justice of the Peace
- Texas law requires a medical examiner office in counties with a population of 1 million or more.
- · There are currently 13 ME offices in Texas, covering 16 counties
- Population served by ME counties is ~ 12 million (59% of state)

#### **Medical Examiners are:**

- Public officials; appointed by the County Commissioners Court
- · Physicians licensed by the Texas State Board of Medicine
- · Trained and experienced in pathology, toxicology, histology, and other medicolegal sciences

#### **Generally investigate deaths:**

- When a person is killed, or dies an unnatural death from any cause, except under sentence of the law
- · In prison or jail
- · In the absence of one or more good witnesses
- · When a person is found dead and the circumstances of the death are unknown
- When the circumstances are such as to lead to suspicion of unlawful means
- · By suicide or suspected suicide
- When unattended by a duly licensed and practicing physician and the local health officer or registrar required to report the cause of death does not know the cause of death
- · When the attending physician(s) cannot certify the cause of death
- · Involving children under six years of age
- · That happen within 24 hours after admission to a hospital or institution



Source: Texas Department of State Health Services, Community Preparedness Section, 2011 tlh

#### **ATTACHMENT 4: DISASTER MORTALITY SURVEILLANCE GUIDELINES**

This attachment outlines the guidelines to be used for disaster mortality surveillance.

#### INTRODUCTION

The mission of the Fatality Management Group (FMG) is to coordinate statewide data collection, analysis, and reporting of disaster-related fatalities (see Tab A).

The overall function of this full versatile and experienced team is to coordinate at the DSHS SMOC, statewide disaster-related mortality surveillance, for a limited time-period (e.g., approximately 5 weeks), with Health Service Regions, local health departments, medical examiner(s), justices of the peace, vital statistics, and other reporting sources.

The FMG is scalable and flexible depending on the magnitude of the fatalities, but will generally include up to three individuals, skilled in epidemiology, data collection, analyses, and report writing. Positions that may serve on this team include Epidemiologists, Research Specialists, and Public Health Technicians.

The FMG will serve in the Operations Section. The FMG reports to the Evacuation & Recovery Branch Director. Additional resources (e.g., personnel, equipment, resources), if needed, will be obtained from the Logistics Section.

The surveillance guidelines detailed below are intended to provide an overview of how this team can conduct statewide data collection, analysis, and reporting of disaster-related fatalities.

#### **GOAL AND OBJECTIVES**

The goal is to identify those deaths that authorities initially think are potentially related to the disaster so that public health action can be taken to prevent future deaths.

The objectives of the disaster-related mortality surveillance are to:

- 1. Identify the number of deaths-related to the disaster and provide basic mortality information about the deceased for public health and emergency officials in affected iurisdictions.
- 2. Identify high risk groups that could benefit from immediate public health interventions.
- 3. Evaluate and assess the direct and indirect impact of the disaster and its human toll in affected communities.
- 4. Provide information on disaster-related mortality for public health and emergency officials to assist in coordinating response actions, and for use in future planning and mitigation efforts.

#### **LEGAL AUTHORITY**

- 1. Annex H of the Texas Emergency Management Plan
- 2. §161.0211 of the Texas Health and Safety Code
- 3. § 92.007 of the Texas Health and Safety Code

#### **CASE DEFINITION**

A case is defined as any death, directly, indirectly, or possibly, associated with the disaster among evacuees, residents or rescue personnel related to the disaster in targeted areas. For example, a hurricane would include: declared disaster counties, counties along the Texas Gulf coast or counties known to have evacuation shelters occurring approximately 5 days prior to disaster landfall and continue for approximately 4 weeks post-landfall.

Deaths classified as "directly related" include any death caused by the physical forces of the disaster, such as wind, rain, floods, or by direct consequences of these forces, such as structural collapse or flying debris.

Deaths classified as "indirectly related" include any death caused by unsafe or unhealthy conditions that occur because of the anticipation, or actual occurrence, of the disaster. These conditions include the loss or disruption of usual services (i.e. utilities, transportation, environmental protection, medical care, police/fire), personal loss, and lifestyle disruption such as temporary displacement or property damage. Deaths that occur from natural causes are considered indirectly related if physical or mental stress before, during, or after the disaster resulted in exacerbation of pre-existing medical conditions and contributed to death.

Deaths classified as "possibly-related" are deaths in the targeted areas that appear to be directly or indirectly-related to the event but for which there is inadequate information available to make that determination at the time of recovery.

Data collection activities should begin when emergency operations start (i.e., Emergency Operations Center or State Operations Center are activated) or when local officials declared mandatory evacuations. Surveillance should continue for a limited amount of time agreed to by interested parties; this could be until emergency operations end or, in the case of a hurricane, approximately 4 weeks after hurricane landfall.

#### **CASE ASCERTAINMENT METHODS**

Surveillance staff will ideally use a combination of active and passive surveillance techniques to identify disaster-related deaths. Active surveillance is based on surveillance staff investigating data sources and finding potential disaster-related deaths; passive surveillance occurs when case reports are submitted by data sources to the surveillance program.

#### **DATA SOURCES**

Information on disaster-related deaths can be obtained from many data sources.

Health Service Regions/ Epidemiologist Response Teams (ERTs) (DSHS): Work
through the ERTs in determining any type of epidemiologic assistance they will need to
collect disaster-related mortality information within their regions. The ERTs may choose
to coordinate all data collection efforts from all data sources in their region and forward
those surveillance data to Austin. Contact information for the ERTs can be found at:
<a href="http://www.dshs.state.tx.us/preparedness/ert.shtm">http://www.dshs.state.tx.us/preparedness/ert.shtm</a>.

- 2. **Medical Examiner Offices**: A list of medical examiner offices and contact information is located in Tab B. Harris County Institute of Forensic Sciences in the past has posted their reported disaster-related fatalities on their website: <a href="http://www.hctx.net/ifs/">http://www.hctx.net/ifs/</a>.
- 3. **Justices of the Peace (JPs)**: An excel directory of the approximately 823 JPs in Texas can be found in WEBEOC's file library under "Phone Numbers and Points of Contact". It is also located at S:\biotshared\02 PROGRAM\02\_01 RESPONSE AND RECOVERY UNIT\Operations Group\01-MASTERS\\_RESOURCES. The source of this directory is the Texas Office of Court Administration's 2011 Texas Judicial System Directory (published version as of March 2011) and can be accessed at: <a href="http://dm.courts.state.tx.us/OCA/DirectorySearch.aspx">http://dm.courts.state.tx.us/OCA/DirectorySearch.aspx</a>.
- 4. **Southeast Texas Forensic Center**: This center, with locations in Beaumont (main office), Conroe, and Tyler, provides forensic services to JPs in East Texas. Though not a ME office, it works closely with participating JPs to help provide the necessary information to rule on a cause and manner of death. Contact information for the Center can be found on their website at: <a href="http://www.setfc.com/loc\_bmt.php">http://www.setfc.com/loc\_bmt.php</a>
- 5. **Texas Poison Control Network**: The Texas Poison Center Network is a joint effort among the six regional poison centers, the Commission on State Emergency Communications, and DSHS to improve the quality of care provided to callers by enhancing and revising treatment protocols, sharing knowledge, and efficiency utilizing state-of-the-art telecommunications capabilities. Contact the network's epidemiologist (mathias.forrester@dshs.state.tx.us), regarding carbon monoxide poisoning related deaths associated with the disaster that may be reported through the network.
- 6. Newspaper /Google News Search: Set up Google news alerts <a href="http://www.google.com/alerts">http://www.google.com/alerts</a> to be sent daily to group member's email; search on key words such as the name of the disaster and "death." With appropriate coordination with the ERTs, follow-up with data sources mentioned in those newspaper articles or data sources in the area on those deaths that are reported in the newspaper.
- 7. Health Information and Vital Statistics Section (DSHS): Contact the Group Manager of the Electronic Registration (Sandra.lackey@dshs.state.tx.us) and Manager of the Field Services (albert.rivera@dshs.state.tx.us) in the Vital Statistics Unit to post a surveillance alert blast message on the Texas Electronic Death Registration (TEDR) login screen regarding the DSHS' effort to identify disaster related deaths. The message could read: "Attention Justices of the Peace and Medical Examiners: The Department of State Health Services is tracking deaths related to 'Disaster' to prevent future deaths. Please describe fully the circumstances of deaths that you think are potentially related to this 'disaster.' Thank you!"

Contact the research specialist (Lyudmila.Baskin@dshs.state.tx.us) in the Center for Health Statistics Unit to obtain excel data extract of all deaths reported in TEDR at regular (e.g., daily, every other day, weekly) intervals after the start of the surveillance effort. She will provide a data dictionary and a data extract. Please review these deaths for possible disaster - related deaths. Review all these deaths for possible disaster - related deaths by conducting a text string search in six descriptive data variables: CAUSE\_A through CAUSE\_D; INJ\_DES; and OTH\_COND. Possible keyword search terms to use in a hurricane are identified in the table below:

By cause Carbon monoxide Poisoning Blunt
Poisoning Blunt
Blunt
Asphyxia
Heat
Fire
Burn
Hit by
Struck by
Inhalation
Fume
Smoke
Toxic
Lightning
Drowning
Motor vehicle
Automobile
Truck

- 8. **Disaster Mortuary Operational Response Team (DMORT)**: DMORT is a federal level response team designed to provide mortuary assistance in the case of a mass fatality incident or cemetery related incident; it works under the local jurisdictional authorities such as MEs, JPs, law enforcement and emergency managers. During a large scale disaster event, DMORT may be activated and will be housed at a Joint Field Office (JFO) in Austin. DSHS will have a representative at the JFO. Keep in contact with our DSHS representative in terms of any deaths reported through DMORT.
- 9. National Center for Environmental Health, Centers for Disease Control and Prevention (CDC): The Preparedness and Response Team in the Center can provide technical assistance on disaster-related mortality surveillance; they may have information on deaths that may have been directly reported to them from the American Red Cross (Texas Chapter) or other sources. Contact the Preparedness and Response Team Leader (Amy Wolkin; 770-488-3402, aif9@cdc.gov), and Disaster Epidemiologists (Tesfaye Bayleyegn; 770-488-3476; bvy7@cdc.gov) (Rebecca Noe; 770-488-3437, rhn9@cdc.gov). For more information on disaster-related mortality at the national level visit CDC's website at <a href="http://emergency.cdc.gov/disasters/surveillance/">http://emergency.cdc.gov/disasters/surveillance/</a>. CDC can provide technical assistance and staff to augment this state effort if it gets an official request.

- 10. American Red Cross (ARC): ARC provides assistance to all families that suffered a loss of a family member and before providing assistance verification that the person has died must be obtained. A CDC-ARC mortality form is completed for their records and a copy is sent to CDC for mortality surveillance. Contact the ARC's Disaster State Health Service Advisor (Tami Dittburner; <a href="mailto:tamid@riograndemedicine.com">tamid@riograndemedicine.com</a>) to inquire on the number of deaths they have identified.
- 11. **National Weather Service (NWS)**: The NWS also tracks deaths related to hurricanes, tropical storms, flash floods, and other weather events. Contact NWS' Warning and Coordination Meteorologist (Hector Guerrero; <a href="Hector.Guerrero@noaa.gov">Hector.Guerrero@noaa.gov</a>) to inquire on the deaths that they have identified. These meteorologists also can distribute information to the Texas Flash Flood Council and to the Texas Flood Plain Management Association).

#### 12. Other Potential Sources:

- a. Social Networking Sites: Social networking sites like Facebook may provide additional information on decedents. Special permission will be needed from ICS supervisor and agency IT to gain access to these sites.
- b. Texas EMS and Trauma Registry (DSHS): The registry collects electronic EMS and major trauma data from EMS firms and hospitals across the state. Though not reported timely for possible disaster related response activities, electronic data information from the EMS and Trauma Registry may still be available and prove useful. Contact the Manager, Epidemiology Studies and Initiatives Branch, Environmental Epidemiology and Disease Registries Section (Tammy Sajak; tammy.sajak@dshs.state.tx.us).

#### **DATA FLOW**

- Designated Health Service Regions/ Epidemiologist Response Teams (ERTs) and participating reporting sources forward surveillance data to Austin on a daily (optimal) basis. Sources could be but are not limited to: Justice of the Peace, Medical Examiner, DMORT, CDC, news media, social networking sites, American Red Cross, Poison Control, and Local Health Departments.
- 2. Upon completion with best available information, ERTs and participating reporting sources should email this form (or fax) it to the Central Office's Fatality Management Group.
- 3. The Fatality Management Group will provide to the HSRs and participating reporting sources the email address(es) and fax number where completed forms should be sent.

#### **DATA VARIABLES**

The DSHS Disaster Surveillance Workgroup has developed a state-specific disaster related mortality surveillance form. This form is located in the WebEOC's file library, the Community Preparedness Sections' shared drive (Response and Recovery's Mass Fatality folder), in Tab C, and on the following website: www.dshs.state.tx.us/comprep/surveillance/default.shtm

#### **DATA MANAGEMENT AND SECURITY**

Review the surveillance information for accuracy. An Access database has been constructed. This database is located in the WebEOC's file library.

From the surveillance form, enter the data into the Access database. Make daily backups of the data. Store the paper and electronic records in a safe and secured place. Retain copies of all surveillance reports. It is the responsibility of strike team member to protect the confidentiality of the records the team possesses. Team members will take special precautions to safely store and dispose of confidential materials.

#### DATA DISSEMINATION (REPORTS)

Preparing and disseminating reports on the surveillance data and resulting public health recommendations is critical.

#### **Preparing Reports**

Analyze the data and prepare daily reports by 5pm (or by designated times instructed by ICS supervisor).

An example of the report (created during Hurricane Ike in 2008) is found in Tab D.

#### Prepare two tables:

- 1) Number of Reported Deaths by Place of Occurrence, and
- 2) Circumstances of Reported Deaths.

Please ensure that the reports contain a statement that the "data is preliminary (subject to change)" and the date and time when the report is released. Make public health recommendations based upon the data analyses.

Prepare a map illustrating the number of deaths by county of occurrence. An example of the type of map that can be prepared is found in Tab E. Mapping assistance can be provided by contacting the GIS support person in DSHS Planning/Intelligence Section (dshsplanning@dshs.state.tx.us).

As the surveillance data increases, prepare more advance data analyses as exampled in Tab F.

#### **Disseminating Reports**

Disseminate these reports daily via email by 5pm to the stakeholders below and share this information with other appropriate staff as needed. Other stakeholders may be added depending on the nature, size and scope of the disaster/event.

# **S**TAKEHOLDERS

AGENCY	TITLE	EMAIL
DSHS	SMOC Director	dshsincidentcmd@dshs.state.tx.us
	P&I Chief	dshsplanning@dshs.state.tx.us
	Operations Chief	dshsoperations@dshs.state.tx.us
	Logistics Chief	dshslogistics@dshs.state.tx.us
	Austin Clinical Epidemiology (if	dshsace@dshs.state.tx.us
	activated)	
	ERT Distribution List	epirt@dshs.state.tx.us
	Regional & Local Health Services	dshsregionalliaison@dshs.state.tx.us
	PnP Asst Commissioner	adolfo.valadez@dshs.state.tx.us
	DSHS Commissioner	david.lakey@dshs.state.tx.us
	CPS Disaster Epidemiologist	david.zane@dshs.state.tx.us
	DMORT Liaison	TBD based on incident
	DIMORILIAISON	I RD based on incident

	Texas Poison Control Network	mathias.forrester@dshs.state.tx.us		
	Epidemiologist			
	CHS Research Specialist	lyudmila.baskin@dshs.state.tx.us		
	VSU Group Managers	Sandra.lackey@dshs.state.tx.us		
		Albert.rivera@dshs.state.tx.us		
	TX EMS & Trauma Registry	tammy.sajak@dshs.state.tx.us		
TDEM	Assistant Director/Chief	nim.kidd@dps.texas.gov		
	State Coordinator-Operations	denita.powell@dps.texas.gov		
	Operations Section Administrator	gisela.ryan-bunger@dps.texas.gov		
CDC	CDC Senior Mgmt Official	TBD		
	CDC IMS EPI Surveillance Team	eocepisurveillancetm@cdc.gov		
	Leader			
	Preparedness & Response Team	Amy Wolkin (ajf9@cdc.gov)		
	Disaster Epidemiologists	Tesfaye Bayleyegn (bvy7@cdc.gov)		
		Rebecca Noe (rhn9@cdc.gov)		
ARC	Texas Disaster State Health	Tamid@riograndemedicine.com		
	Service Advisor			
104/0	)			
NWS	Warning and Coordination	Hector.guerrero@noaa.gov		
	Meteorologist			
Other		Obtain email addresses of other data		
Data		reporters and disseminate		
Reporters		surveillance reports to them		
Roportors		<u>Sarvomarios reports to trierii</u>		
1				

An example of the email message text can be found in Tab G.

#### **TAB A: FATALITY MANAGEMENT GROUP**

Resource Type: Fatality Management Group

Category: Health & Medical (ESF # 8)

Kind: Group within the Evacuation & Recovery Branch in the Operations Section

Mission: Coordinate at DSHS (Austin) the statewide data collection, analysis, and reporting of disaster-related fatalities.

MINIMUM CAPABILITIES:	TYPE I	TYPE II	TYPE III
Overall Function (local area requests expertise)	Full versatile and experienced group to coordinate at DSHS (Austin) mortality surveillance, for a limited time-period (usually 6-8 weeks), with regional and local health departments, medical examiner(s), justices of the peace, vital statistics, and other reporting sources (e.g. hospitals).		
Team Member Subject Area Composition	Skills in epidemiology, data collection, analyses, and report writing, (Positions include Epidemiologists, Research Specialists, and Public Health Technicians.)		
Personnel Standard	The FMG is scalable and flexible depending on the magnitude of the fatalities, but will generally include 3 individuals.		
Equipment and Supplies	Computer and appropriate software (Word, Excel, Epi Info, Access) Printer Fax machine Telephone Internet access		

#### TAB B: LIST OF MEDICAL EXAMINERS

**BEXAR COUNTY** 

Randall E. Frost, MD Chief Medical Examiner 7337 Louis Pasteur

San Antonio, TX 78229-4565

Phone: 219-335-4000

**COLLIN COUNTY** 

William Rohr, MD Chief Medical Examiner 700B Wilmeth Rd McKinney, TX 75069

Phone: 972-424-1460 x3775

DALLAS COUNTY

Jeffery Bernard, MD Chief Medical Examiner 2355 North Stemmons Freeway

Dallas, TX 75207 Phone: 214-9205900

**ECTOR COUNTY** 

Nathan Galloway, MD Chief Medical Examiner

200A West 3rd Odessa, TX 79761 Phone: 432-617-3296

**EL PASO COUNTY** 

Juan U. Contin, MD

Interim Chief Medical Examiner

4504 Alberta Ave El Paso, TX 79905 Phone: 915-532-1447

**GALVESTON COUNTY** 

Stephen Pustilnik, MD Chief Medical Examiner 6607 Highway 1764 Texas City, TX 77591 Phone: 409-935-9274

HARRIS COUNTY

Luis Arturo Sanchez, MD Chief Medical Examiner Harris County Institute of Forensic Sciences 1885 Old Spanish Trail

Houston, TX 77054-2098 Phone: 713-796-9292 LUBBOCK COUNTY

Sridhar Natarajan, MD Chief Medical Examiner 4434 South Loop 289 Lubbock, TX 79414 Phone: 806-687-9434

**NUECES COUNTY** 

Ray Fernandez, MD Chief Medical Examiner 2610 Hospital Blvd Corpus Christ, TX 78405 Phone: 361-884-4994

TARRANT, PARKER, DENTON & JOHNSON COUNTIES

Nizam Peerwani, MD Chief Medical Examiner 200 Feliks Gwozdz Place Fort Worth,TX 76104-4919 Phone: 817-920-5700

TRAVIS COUNTY

David Dolinak, MD Chief Medical Examiner

1213 Sabine PO Box 1748

Austin, TX 78767-1748 Phone: 512-854-9599

WEBB COUNTY

Corinne E. Stern, MD Chief Medical Examiner Jenry Cuellar Roadway

PO Box 2353 Laredo, TX 78040 Phone: 956-722-7044

WICHITA COUNTY

Garu Ozier, MD

Chief Medical Examiner

4327 Barnett Rd

Wichita Falls, TX 76310 Phone: 940-397-5440

# TAB C- MORTALITY SURVEILLANCE FORM AND INSTRUCTIONS

Part I	Deceased inform	nation	
1. Case / medical record number:	2. Name: First	□ Unknown Midd	dle Last
3. Date of Birth://(MM/DD/YY)  □ Unknown		s: < 1 yr	
5. Residence of decedent: Address City State	6. Ethnicity:  Hispanic  Non Hispanic Unknown	□ Black or Africa	an or Alaskan Native □ White an American □ Asian an or other Pacific Islander □ Other race
8. Gender:    Male   Female   (MM/DD/YY)   Undetermined   Unknown	/	10. Time of Death:	
11. Place of death:  Decedent's home Other person's home Prison or detention center Nursing Home / long term care facility  12. Location of death: City County County		er/shelter [	□ Vehicle □ Hospital □ Hospice facility □ Unknown □ Other (specify) rorker involved in disaster response?
State Part II Probable	Cause and Circumst	ance of death (check on	e that hest annlies)
14. Cause of death— Injury  Drowning  Electrocution  Lightning  Motor Vehicle occupant/driver  Pedestrian/bicyclist struck by vehicle  Structural collapse  Fall  Cut/struck by object/tool  Poisoning/ toxic exposure:  CO exposure  Inhalation of other fumes/smoke, dust  Ingestion of drug or substance  Other (specify)  Suffocation/asphyxia  Burns (flame or chemical)  Firearm/gunshot  Heat (e.g., hyperthermia, dehydration)  Cold (e.g., hypothermia)  Other (specify)  Unknown cause of injury	□ Neurolog □ Respirat □ Cardiova □ Renal fa □ GI and e □ Sepsis □ Allergic I □ Other (s) □ Unknown	e of death— Illness gical disorders ory failure ascular failure ilure endocrine	16. Probable relationship of cause of death to disaster:  Direct Possible Indirect Unrelated  17. Probable manner/intent of death: Natural Suicide Accident Pending Homicide Undetermined  18. Circumstance of death: (free text)
Part III	Reporting Person a	nd Agency	
Contact Person:	Agency:		Telephone:
Rev 09/13/08			Date of report completed:  (MM/ DD/ YY)

# TAB C- MORTALITY SURVEILLANCE FORM AND INSTRUCTIONS

(General instructions for completion of mortality form – ONE PER DECEDENT)

Complete the mortality form for all known mortalities related to a disaster: This information should be obtained from a medical

examiner or justice of the peace office if possible. Please complete one form per decedent. Email to dshsplanning@dshs.state.tx.us or FAX to (512) 532-4980

Deceased	Q1. Case/ Medical record number— As appears in facility record
Information	Q2. Names: First, Middle, and Last name
	Q3. Date of birth — Date of birth in MM/DD/YY format
	Q4. Age in years— Age in years, if age is less than one year please check the appropriate box
	Q5. Residence of decedent— Decedent's address, city, and state of residence
	Q6. Ethnicity— Hispanic or non-Hispanic category
	Q7. Race: Select one or more of the racial category.
	Q8. Gender— Male, female
	Q9. Date of death — Date of death in MM/DD/YY format
	Q10. Time of death— Enter the exact or estimated time and minute according to 24- hour clock
	Q11. Place of death— Place where deceased was physically located at the time of death
	Q12. Location of death— City, county, and state of death
	Q13. — Refers to work related deaths, this include volunteers deployed for disaster response.
Cause and	Q14. Cause of death/ injury: Record the mechanism that best describes the death. Record other and specify if the cause is not
Circumstance	listed, but is known.
of Death	Drowning— Includes but not limited to accidental drowning while in natural/flood water or following fall into natural/flood
Oi Death	water.
	Electrocution—Includes but not limited to exposure to electric transmission lines or other unspecified electric current.
	Lightning—Includes death related to thunder or lightning
	<ul> <li>Motor vehicle occupant/driver—Includes collisions relating to land transport accidents (e.g., car, motorcycle)</li> </ul>
	<ul> <li>Pedestrian/bicyclist struck by vehicle—Includes collisions involved non-motorized road users with motorized vehicles</li> </ul>
	during the disaster period.
	Structural collapse—Included but not limited to building or shelter collapse
	Fall—includes but not limited to falls on same level from slipping or tripping; falls involving ice and snow; falls from trees,
	bed, stairs, roofs, ladders, etc.
	<ul> <li>Cut/ struck by object/tool—Includes but not limited to contact or collision with inanimate objects that results in a physical</li> </ul>
	damage and causes death
	<ul> <li>Poisoning/ toxin exposure— Includes accidental poisoning by and exposure to liquids or gases and ingestion of drugs or</li> </ul>
	substances.
	<ul> <li>Suffocation— Includes but not limited to mechanical or oxygen depleted environment</li> </ul>
	Burn- Includes but not limited to chemical, fire, hot object or substances contact
	· · · · · ·
	<ul> <li>Firearm/gunshot— Firearm injuries, including self-inflicted</li> <li>Heat related injury—Includes excessive heat as he cause of heat stroke, hyperthermia, dehydration, or others</li> </ul>
	Cold related injury—includes excessive fleat as the cause of hypothermia
	Q15 Cause of death/ illness— Record the cause that best describes the disease process. If other, please specify.
	• Neurological disorders—Includes but not limited to CNS infectious disease, seizure disorder, intracerebral hemorrhage,
	cerebral infarction and stroke
	Respiratory failure—Includes but not limited to COPD, pneumonia, asthma and pulmonary embolism
	Cardiovascular failure—Includes but not limited atherosclerotic cardiovascular disease, heart failure
	Renal failure—Includes kidney failure and other disorders of the renal system
	Gl and endocrine—Includes but not limited to upper and lower GI bleeding, jaundice, hepatoma and pancreas
	Sepsis—Includes systemic infection
	Allergic reaction— Topical or systemic reaction including anaphylactic shock
	Q16. Relationship
	Direct —refers to a death caused by the environmental force of the disaster (e.g., wind, rain, floods, or earthquakes) or by
	the direct consequences of these forces (e.g., structural collapse, flying debris).
	<ul> <li>Indirect— refers to unsafe or unhealthy conditions, or conditions that cause a loss or disruption of usual services that</li> </ul>
	contributed to the death. Unsafe or unhealthy conditions may include but are not limited to hazardous road conditions,
	contaminated water supplies, scattered debris. Disruptions of usual services may include but are not limited to utilities,
	transportation, environmental protection, medical care or police/fire.
	<ul> <li>Possible— refers to a death that occurred in the disaster-affected area during the disaster period. The cause or manner of</li> </ul>
	death is undetermined or pending and the informant believes that a possible relationship between the death and the
	disaster might exist.
	<ul> <li>Unrelated— refers to a death with no relationship to the disaster</li> </ul>
	Q17. Manner/intent of death—Record the category that best describes the manner/intent of death
	Q18. Circumstances of death: Describe, in free text, the circumstances of the death; what happened?
1	Contact Person and Telephone: Name of reporting person and telephone
Reporting	Contact - Coon and receptions. Name of reporting person and telephone
Person/	Agency: Agency that provided the information
Agency	rigonoy. Agonoy that provided the information
Agonoy	Date of report completed: Date of the survey form completed in MM/DD/YY format
	Date of report completed. Date of the survey form completed in MINI/DD/11 Toffinat

# TAB D: EXAMPLE OF DAILY SURVEILLANCE REPORT



# 2008 Hurricane Ike-related Deaths Texas

Updated 09/26/08 at 4:30pm

Preliminary – Subject to Change

Table 1: Number of Reported Deaths by Place of Injury:

Place of Injury	Number of Reported Deaths	Source
Dallas County	3	Dallas County Medical Examiner
Fort Bend County	1	JP Fort Bend County
Harris County	11	Harris County Medical Examiner Memorial Hermann Healthcare System
Galveston County	11*	Galveston County Medical Examiner
Montgomery County	4	Harris County Medical Examiner, Southeast Texas Forensic Center JP #1 Montgomery County
Jefferson County	1	Southeast Texas Forensic Center
Nueces County	1	Nueces County Medical Examiner
Tarrant County	1	DSHS Health Service Region 2/3
Trinity County	1	Southeast Texas Forensic Center
Bexar County	2	JJ Nichols TB Program
Orange County	3	Jefferson County Forensic Pathologist
San Augustine	1	DSHS – HSR 4/5 North Tyler
Walker County	5	JP #1 Walker County JP #2 Walker County
	2*	Southeast Texas Forensic Center
Total	47*	

Table 2: Circumstances of Reported Deaths

Circumstances of Reported Deaths	Number
Carbon Monoxide Toxicity	6*
Drowning	5*
Respiratory Failure	3
Pedestrian/bicyclist struck by	1
vehicle	
Cut/Struck by Object	3
Suffocation/asphyxia	1
Burns Flame/Chemical	2
Cardiovascular Failure	2
Other	3
Pending	20*
Unknown	1
Total	47*

<sup>\*</sup>Preliminary – Subject to Change Note: Efforts will continue to seek information from other reporting sources. 29 of 33

# TAB E: EXAMPLE OF MAP ILLUSTRATING DEATHS BY COUNTY

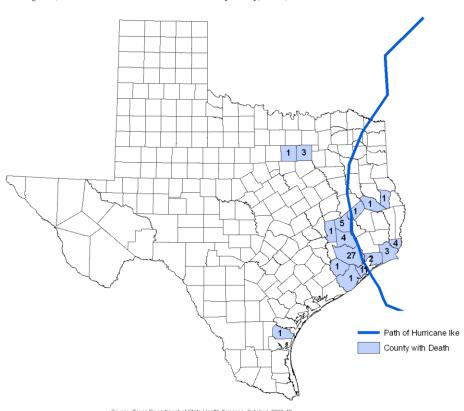


Figure 1, Number of HUrricane Ike Related Deaths by county, Texas, 2008

# TAB F: EXAMPLE OF ADVANCED DATA TABLES

TABLE 1. Number of deaths and their relationship to Hurricane Ike, by cause of death — Texas, September 8 through October 13, 2008

				Tot	:al
Cause of Death	Direct	Indirect	Possible	No.	%
Injury					
Carbon monoxide exposure		13		13	18
Drowning	8			8	11
Hit by falling tree limb	2	5		7	9
Burns (flame or chemical)		2	1	3	4
Firearm		3		3	4
Fall		2		2	3
Ingestion of drug or substance		2		2	3
Inhalation of other fumes/smoke/dust		1		1	1
Suffocation/asphyxia		1		1	1
Electrocution		1		1	1
Pedestrian/bicyclist struck		1		1	1
Motor vehicle accident		1		1	1
Other or unknown cause of injury		1	3	4	5
Illness					
Cardiovascular failure		8	4	12	16
Respiratory failure		1	2	3	4
Renal failure		2		2	3
GI and endocrine		1		1	1
Other illness		3		3	4
Unknown			2	2	3
Undetermined		1	3	4	5
TOTAL	10	49	15	74	

Source: Case reports from the Texas Department of State Health Services Hurricane Ike mortality surveillance system (2008)

TABLE 2: Selected Characteristics of Probable Deaths Associated with Hurricane Ike, Texas, September 8 through
October 13, 2008

Characteristic	N=74	%
GENDER		
Male	52	70
Female	22	30
AGE (years)		
0 to 19	12	16
20 to 39	13	18
40 to 59	24	32
60+	23	31
Missing	2	3
RACE		
American Indian	1	1
Black or African American	9	12
White	34	46
Asian	1	1
Other	1	1
Missing	28	38
ETHNICITY		
Hispanic	17	23
Non Hispanic	27	36
Unknown	13	18
Missing	17	23
PROBABLE RELATIONSHIP OF CAUSE OF DEATH TO HURRICANE		
Direct	10	14
Indirect	49	66
Possible	15	20
PROBABLE MANNER/INTENT OF DEATH		
Natural	20	27
Accident	33	45
Suicide	5	7
Pending	12	16
Undetermined	4	5

Source: Case reports from the Texas Department of State Health Services Hurricane Ike mortality surveillance system (2008)

# TAB G EXAMPLE OF EMAIL TEXT DISSEMINATING DAILY SURVEILLANCE REPORT

Subject: Hurricane x -daily mortality report (DATE)
Attachments:
Attached is today's mortality report.
Thanks to the many who helped inform, initiate and encourage the reporting of Hurricane x-related deaths.
The data suggests the following public health recommendations:
1. 2. 3. 4.
Thank you for very much.
Signed,
DSHS Fatality Management Group